Quizz 2 - OOP

Full name

Q1 - Describe this code line-by-line.

```ruby
1  first_name = ["Pierre", "Paul", "Jacques"].sample
2  last_name = "Paillard"
3  puts "Great! #{first_name} #{last_name} is born"
```

1.
2.
3.

Q2 - What's `initialize`? When is it called and what's its purpose?

Q3 - Consider this code. What's the difference between `string` and `String`?

```ruby
1  string = String.new("Hello World")
```

Q4 - What does this method do?

```ruby
1  def mystery_method(pets)
2    mammal_pets = []
3    for pet in pets
4      mammal_pets << pet if pet.mammal?
5    end
6    return mammal_pets
7  end
```

Q5 - Re-implement previous method `mystery_method` using a nice `iterator` instead.

```ruby
1  pets = [ MysteryObject.new("mouse"), MysteryObject.new("hummingbird") ]
2
3
4
5
6
```

Q6 - Write an `Animal` class that could be use in place of the `MysteryObject` at Q5. Implement a `mammal?` instance method that would work with the code at Q4.

```
1  class
2
3
4
5
6
```

Q7 - Write a class `Dog` which inherits from `Animal`. How `mammal?` should be overriden?

```
1  class
2
3
4
5
6
```

Q8 - Consider this code

```
1  class Fish
2    def self.overview()
3      return "Fishes can live in the sea"
4    end
5    def swim
6      # I'm swimming
7    end
8  end
```

Please, write some code **calling** both methods `overview` and `swim`.

```
1  # TODO: use overview and swim
2
3
```

Q9 - Let's define 2 classes, `Liquid` and `Alcohol`.

```
1  class Liquid
2    def drink
3      puts "You drank some liquid"
4    end
5    def evaporate
6      puts "There is no more liquid"
7    end
8  end
9
10 class Alcohol < Liquid
11   def drink
12     puts "You are now drunk"
13   end
14 end
```

What is printed line 2 and 3 of the following ruby script?

```
1  beer = Alcohol.new
2  beer.drink
3  beer.evaporate
```

2.

3.

```
1  class Liquid
2    def drink
3      puts "You drank some liquid"
4    end
5    def evaporate
6      puts "There is no more liquid"
7    end
8  end
9
10 class Alcohol < Liquid
11   def drink
12     super
13     puts "You are now drunk"
14   end
15 end
```

Same question with this new `drink` method. What is printed on line 2 and 3.

```
1  beer = Alcohol.new
2  beer.drink
3  beer.evaporate
```

2.

3.